

Name: _____

pa1106: Factoring with box when $a = \text{prime}$ (v15)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18 , until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	
2x	$2x^2$	$-12x$
3	$3x$	-18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $3x^2 + 26x + 16$.

*	x	
3x	$3x^2$	$24x$
2	$2x$	16

ANSWER: $(3x + 2)(x + 8)$

Question 2

Use the box to factor $7x^2 + 33x - 10$.

*	x	5
7x	$7x^2$	35x
-2	-2x	-10

ANSWER: $(7x - 2)(x + 5)$

Question 3

Use the box to factor $5x^2 - 29x + 20$.

*	x	-5
5x	$5x^2$	-25x
-4	-4x	20

ANSWER: $(5x - 4)(x - 5)$